Roads and Streets

Design, Construction, Maintenance and Traffic Control

INDEX

Vol. LXXI, January-December, 1931

GENERAL INDEX

A

Accidents in Construction 234
Accounting System for County Roads 433
Administration, Highway 49
Airport Construction, Contracting Units for 20
Airports, Bituminous Surfaces for 223
Akron-Canton Superhighway 447
Alloy Steels in Road Building Equipment. 406
American Road Builders Association, 1931 Convention 36
A. R. B. A. 1931 Committee Reports 49
Asphalt Emulsion for Construction of Parking Spaces 403
Asphalt Emulsions in Retread Work 152
Asphalt Macadam, Hot-Mixed 215
Asphalt Resurfacing of Old Brick Paving 92
Asphalt Surface Treatment Covered with Mine Tailings 326
Asphalt-Surfaced Concrete Walks 62
Asphalt Types, Emulsified, Economic Features of 307
Asphaltic Concrete, High Production 359
Asphaltic Concrete Pavements, Kerosene Non-Skid Treatment 171
Asphaltic Concrete, Wisconsin 253
Asphaltic Surfacing of Gravel Roads, Wisconsin 250
Automobiles, Cost of Operating 306

B

Bases, Pavement 53
Batchers, Automatic on New York Paving Job 491
Bayshore Highway, California Construction 1
Before and After Pictures 32, 77, 114, 150, 192, 282, 340, 382, 446, 464, 514
Beautification, Roadside, Connecticut 70
Bituminous Concrete, Resurfacing 159
Bituminous Construction, Mixed in Place, West Virginia 103
Bituminous Macadam Construction, Oregon 135
Bituminous Macadam, Resurfacing 467
Bituminous Macadam, Rochester, Mich ... 416
Bituminous Mixed in Place Construction, Western States 319
Bituminous Penetration Macadam, Niagara County, N. Y. 254
Bituminous Paver Constructs Black Top. 479
Bituminous Surfaces for Airports 223
Bituminous Surfaces, Low Cost 109
Bituminous Surfacing, Cold-Mix 250
Bituminous Surfacing, Hot-Mix 250
Black Top, Use of Finishing Machine on. 370
Bonds, Road, Economy of Paying Interest on 414
Book Reviews 271
Brick Pavement, Akron-Canton Superhighway 447
Brick Paving, Old, Resurfacing with Sheet Asphalt 92
Brick Resurfacing on Worn Concrete, Illinois 302
Bridge, Concrete Arch, Temple, Ariz. 300
Bridge Construction, Treated Timber 420
Bridge, Plate Girder, 154 Ft. Span 259
Bridges, Construction Details That Are Sometimes Neglected 420
Bridges, Mexican 171
Bridges, Minnesota Highway 4
Bridges, Old, Missouri 222
Bridges, Positions on Concrete Highways. 374
Bridges, Short Span Steel, Reconditioning by Welding 97
Business Cycle, Method of Eliminating .. 23

C

California Division of Highways, Equipment Developed by 204
Cameron County Road System 29
Cast Iron Pipe Culverts for Highways ... 484
Center Line Painting, Cost 358
Center Striping Concrete Pavement, Oakland County, Mich 81
Central Mixed Concrete 55
Central-Mixed Concrete, Tests of Truck Conveyed 267
City Entrance Designed as Part of Park Development 410
City Triangulation 424
Civil Divisions, Township 281
Cold Mix Paving, Greene, N. Y. 363
Columbiana County, Ohio, Road Program. 509
Concrete, Applying Center Stripe 81
Concrete Arch Bridge, Temple, Ariz. 300
Concrete, Central Mixed, Tests of Truck Conveyed 267
Concrete, Central and Truck Mixed 55
Concrete, Fabric Reinforcement, Methods of Installing 209
Concrete, Mesh Reinforcement, Method of Placing 313
Concrete Pavement, Old, Salvage Value of. 470
Concrete Pavements, Building 40 Ft. Wide, California 1
Concrete Pavements, Core Drilling Practice 327
Concrete Pavements, Durability Tests 503
Concrete Paving, Hollywood District, Los Angeles 247
Concrete Paving, Tandem Mixers on 87
Concrete Resurfacing with, on Old Concrete Base 201
Concrete, Single Track, Delaware 240
Concrete Slabs, Raising with Mud Pump. 123
Concrete Viaduct, 4th St., Los Angeles .. 367
Concrete Walks with Asphalt Surface ... 62
Construction Industry, Stabilizing 71
Construction Picture, Michigan Highways 61
Construction Pictures, Minnesota Highways 4
Construction Views, Pennsylvania Highways 126
Contractors, Eliminating Irresponsible ... 116
Contractors, Highway, Legal Decision Affecting 94
Conveyor Belt, Unloading, Special 339
Correct Inference, Improbability of from False Premises 179
Corrugated Iron Pipe, Jacked Under Street 261
County Road Field, Digest of Papers at A. R. B. A. Convention 237
County Roads, Accounting System for 433
County Roads, Cameron County, Texas .. 29
County Roads, Expenditures 1930-1931 ... 64
County Roads, North Carolina, Taken over by State Highway Department. 145
County Road Program, Columbiana County, Ohio 509
County and Township Road Field, a Continuous Market 64
County and Township Roads 25, 73, 109, 147, 237, 281, 333, 377, 433, 460, 509
Court Decisions Affecting Highway Contractors 94
Culverts, Cast Iron Pipe 484
Culverts, Frozen, Thawing 228
Curve Widening and Bridge Location 374
Curves, Simple Method of Setting Out Super-Elevation 452
Cuts, Pavement, Charges for Repairing ... 412

D

Drives, Forest Preserves, Cook County, Ill. 403
Dust Elimination in California 230
Dynamite Use in Fill Settlement 139

E

Earth Roads, Oiled 377
Earth Roads, Oiling, Missouri 287
Educational Advantages from Improved Roads 517
Embankments, Highway 54
Embankments, Precautions in Constructing 68
Embankments, Settlement with Explosives 139
Emulsified Asphalt Types, Ecomonic Features of 307
Emulsified Asphalt, Use in Cook County Forest Preserves 403
Emulsions, Asphalt, for Airport Surfacing. 223
Equipment, Developed by California Division of Highways 204
Equipment, Highway Maintenance, Virginia 100
Equipment, Road Building, Use of Alloy Steels 406
Equipment, Snow Removal 55
Experimental Road, Black Top, Du Page County, Ill. 479
Experimental Roads, Maryland 229
Explosives, Use in Fill Settlement 139

F

Fabric Reinforcement, Methods of Installing 209, 313
Fact-Gathering, Deficient Training in 235
Farm to Market Roads 25
Fill Settlement with Explosives 139
Finishing Machine on Ohio Black Top .. 370
Fire Hazards along Highways, Eliminating 507
Forms, Unusual for Resurfacing Job 278
Frost-Boils, Cured by Tile Drains 257
Frost Heaves, Studies of, Michigan 272
Frost Heaving, Correction 164

G

Grade Crossings, Highway 56
Grade Separations, New York State 325
Grading, Earth Road 242
Grading, Low Cost on Oklahoma Highways 168
Grading, Mountain Road 96
Gravel, Oiled, Oklahoma 6
Gravel, Oiled, Sangamon County, Ill. 73
Gravel Roads, Asphaltic Surfacing of 256
Gravel Roads, Low Cost Bituminous Surfaces for 109
Gravel Roads, Resurfacing 155
Gravel Roads, Traffic Bound 181
Gravel Roads, Traffic Bound, Logan County, Ill. 147
Gravel, Trailer for Spreading 184
Gasoline Tax, 1930 318

H

Highway Accidents 422
Highway Administration, Township 342
Highway Administration and Finance ... 49
Highway Administration, Industrial Management Method Applied to 357
Highway, Bayshore, California, Construction Method 1
Highway, Built to Artic Ocean 489
Highway Construction Pictures, Indiana. 456
Highway Construction Pictures, Kansas .. 256
Highway Construction Pictures, Ohio 362
Highway Construction Pictures, Wisconsin 166
Highway Construction, State, Statistics .. 13
Highway Contractors, Legal Decisions Affecting 94
Highway Engineering, Application of Soil Science to 163
Highway Equipment, Developed by California Division of Highways 204
Highway Financing 217
Highway Financing, Review of 185
Highway Improvements, Financing 407
Highway, Inter-American, Construction Progress 316
Highway Location 52
Highway Location, Evaluation of Distance and Time in 231
Highway Maintenance Equipment 100
Highway Maintenance Organization, Woodbury County, Iowa 78
Highways, Michigan, Pictures 61
Highways, Minnesota Construction Views. 4
Highway Mileage and Population 337
Highway Outlook for 1931 22
Highway Research, Abstracts of Reports. 277
Highway Romance 332

I

Industrial Management Methods Applied to Highway Work 357
Inter-American Highway, Panama Construction 316
Iron Road Surface, Experimental 411

J

Jacking Conduit Under Street 261
Jetting for Settlement of Peat 163

K

Kerosene Non-Skid Treatment on Asphaltic Concrete Pavements 121
Kinks, Construction on Road Job 46
Kyro-Petsamo Highway, Finland 489

L

Local Road Improvement Plan 24
Location, Highway 52
Logan County, Ill., Traffic Bound Gravel Roads 147
Low Cost Road Movement 460
Low Cost Roads, Abstracts of 1931 A. R. B. A. Reports 56
Low Cost Roads, Delaware 240
Low Cost Roads in New Countries 206
Low Cost Roads Research Problems 337

M

Macadam, Hot-Mixed Asphalt 215
Magnetic Nail Pickers, New Mexico 101
Magnetic Nail Picker, Results in Missouri. 214
Magnetic Road Sweeper, North Dakota's Experience 371
Maintenance, Equipment in Virginia 100
Maintenance, Gravel Road 153
Maintenance, Highway, Organization Woodbury County, Iowa 78
Maintenance, Traffic Bound Roads 54
Market Roads, Improved, Smith County, Texas 466
Michigan Highways, Construction Views. 61
Michigan Studies of Frost Heaves 272

Mine Tailings Cover Asphalt Surface Treatments 326
Mixed in Place Construction, Texas..... 174
Mixed in Place, Construction, West Virginia 103
Mixed in Place, Construction in Western States 319
Mixers, Paving, Average Mileage..... 3
Mixers, Tandem, on Concrete Paving..... 87
Motor Vehicle Fees in 1930..... 233
Mountain Road Grading, Colorado..... 90
Multiple Lift Bituminous Macadam, Oregon 135

N

New Equipment and Materials....84, 118, 155, 196, 246, 293, 350, 387, 443, 475, 523
Night Driving, Road Test for..... 461
North Carolina County Roads Taken over by State Highway Department..... 145

O

Oiled Gravel, Sangamon County, Ill..... 73
Oil-Mix, Owens Valley Highway..... 41
Oiled Earth Roads..... 377
Oiled Graveled Roads, Oklahoma..... 6
Oiling Earth Roads..... 287
Owens Valley Highway, Production Cost Studies 41

P

Panama, Highway Construction..... 316
Parking, Effect on Traffic Congestion.... 499
Parking Spaces, Construction in Cook County Forest Preserves..... 403
Pavement Bases..... 53
Pavement Core-Drilling Practice..... 327
Pavement Costs, Methods and Charges... 412
Pavement Settlement, Repairing with Mud Pump 123
Pavement Slabs, Machine for Lifting..... 12
Paver, Bituminous..... 479
Paving, $3,000,000 Program, Los Angeles, Calif. 247
Paving Material, Scientific Control Methods, Indianapolis, Ind..... 329
Paving, Street, Recent in Chicago..... 95
Peat Settlement by Jetting..... 163
Pennsylvania Highways, Construction Views 126
Planning, State Highway Developments, California-Carolina Contrast..... 297
Production Cost Studies, Owens Valley Highway 41

R

Reinforcement, Concrete Pavements, Method of Placing 313
Reinforcement, Fabric, Methods of Installing 209
Reports, A. R. B. A., 1931 Convention... 49
Research, Highway, Abstracts of Reports. 277
Research Problems of Low Cost Roads... 337
Resurfacing Bituminous Macadam..... 467
Resurfacing, Old Brick with Sheet Asphalt 92
Resurfacing Worn Concrete with Brick, Illinois 302
Retread Construction, West Virginia..... 159
Retread, Wisconsin..... 250
Retread Work with Asphalt Emulsions.. 152
Riverside, Calif., City Entrance Design.. 410
Road Bonds, Economy of Paying Interest on 414
Road Builders News 33, 82, 194, 244, 290, 347, 384, 429, 471, 519
Road Building, South Dakota..... 513
Road, Experimental, Sangamon County, Ill. 73
Road Jobs, Ordinary, Daily Happenings on 46
Road Magnet, Results in Missouri..... 214
Road, Mountain Grading in Colorado..... 90
Road Oiling, Oklahoma..... 6
Road Program, Columbiana County, Ohio. 509
Roads, County and Township..... 25
Roads, Improved, Educational Advantages from 517
Roads, Low Cost in New Countries..... 206
Roads, Resurfacing with Hot-Mixed Asphalt Macadam..... 215
Roads, Test for Night Driving..... 461
Roadside Beautification, Connecticut..... 70
Roadside Beautification, Westchester County, N. Y..... 128
Rock Asphalt, Steaming in Winter Work. 228

S

Sand Asphalt, Construction Methods..... 9
Sand Asphalt, Dune and Beach Sands Used in..... 172
Sand Asphalt, Construction Methods, North Carolina..... 304
Sand Asphalt, Premixed, Delaware..... 240
Sand Asphalt, North Carolina..... 172
Sangamon County, Ill., Experimental Road 73
Scientific Research, Basic Method of..... 179
Scientific Theories, Teaching History of.. 107
Sheet Asphalt, Resurfacing Old Brick Paving with..... 92
Single-Lane Pavements, Delaware..... 240
Slag Macadam, Traffic Bound, Delaware.. 240
Snow Removal, Highway..... 55
Snow Removal Methods..... 393
Snow Removal, Methods, Van Buren County, Mich..... 417
Soil Science, Application to Highway Engineering 163
Speeding, Suggested Cure for..... 71
State Highway Construction, 1930 and 1931 13
State Highway Planning, California-Carolina Contract..... 297
State Highway Work, Present Status.... 418
Steel Pavement for Seattle Bridge..... 170
Street Cleaning, St. Paul, Minn..... 375
Street Cleaning, Toronto..... 265
Street Improvements, Financing..... 407
Street Paving, Recent in Chicago..... 95
Street Sanitation Records, Uniform..... 177
Subgrades 53
Super-Association or Period Plan..... 299
Super-Elevation, Simple Method of Setting Out..... 452
Superhighway, Akron-Canton, Ohio..... 447
Surface Treatments, Covered with Mine Tailings 326
Surveys, Highway Location.....52, 231

T

Tandem Pavers for Concrete Paving..... 87
Tar for Highway Surfaces, Latest Development 132
Tar Macadam, Premixed..... 353
Tarmac, Methods and Costs, Greene, N.Y. 363
Tarvia-Lithic, Construction Methods..... 353
Test Roads, Maryland..... 229
Tests, Durability of Concrete Pavements.. 503
Tests, Paving Material, Indianapolis, Ind. 329
Textbooks, Needed Reform in..... 458
Tile Drains, Solve Frost-Boil Problems... 257
Tires, Tests of..... 495
Township Highway Problems.....281, 342
Township Roads, Legislated into County System, Michigan..... 333
Traffic Bound, Gravel Roads..... 181
Traffic Bound Gravel Roads, Logan County, Ill..... 147
Traffic Bound Roads, Maintenance..... 54
Traffic Control..... 487
Traffic Control, Effect of Parking on Congestion 499
Traffic Engineering, a New Profession... 506
Traffic Improvement Aids Unemployed... 458
Transition Curve Solutions..... 452
Treated Timber Bridge Construction..... 420
Triangulation, City..... 424
Truck Mixed Concrete..... 55

U

Unemployed, Aided by Traffic Improvement 458

V

Viaduct, Building Architectural Beauty into 367

W

Walks, Concrete with Asphalt Surface... 62
Welding for Reconditioning Short Span Steel Bridge..... 97
Westchester County, N. Y., Roadside Beautification 128
Wire Mesh Reinforcement, Methods of Installing 209, 313
Woodbury County, Iowa, Highway Maintenance Organization..... 78

AUTHOR'S INDEX

A

Arnheim, W. W..... 487

B

Baldock, R. H..... 135
Barnett, R. C..... 414
Beckham, W. K..... 121
Behrens, Wm. H..... 401
Benkelman, A. C..... 272
Bennett, R. W..... 101
Biddleman, Miller..... 152
Blair, John E..... 174
Blaney, Norman A.....25, 185
Bowlby, H. L..... 223
Bromley, J. G..... 112
Brown, Earle..... 422
Brown, V. J..... 299
Burch, James S..... 209
Burton, Victor R..... 163

C

Carter, H. S..... 454
Clelland, S. H..... 313
Clemmer, H. F..... 503
Clow, George H..... 109
Crum, R. W..... 407
Crutcher, Jr., I. H..... 466

D

Dancy, Oscar C..... 29
Deal, H. J..... 406
Dougherty, N. W..... 231
Downer, Jay..... 128

F

Eberly, V. A..... 374
Edwards, R. W..... 41
Estes, Charles C..... 403

F

Fisher, Charles T.....46, 484
Fixmer, H. J..... 95
Flatt, Truman L..... 73
Fox, Frank W..... 495

G

Gates, E. L..... 479
Gesling, Fred 228
Gould, C. B..... 257
Greuter, J. B..... 181

H

Halsey, Maxwell..... 499
Hannen, J. W..... 333
Hawkins, W. E..... 304
Haxstun, A. K..... 206
Hoffman, Paul G..... 506

J

James, N. L..... 41
Johnson, L. H..... 509
Johnson, Myron G..... 329

K

Keist, O. H..... 467
Knopf, Samuel..... 240

L

Le Clear, W. M..... 357
Leeming, J. J..... 452
Lindsey, Ray..... 6
Lyle, William T..... 458

M

MacDonald, Thos. H..... 217
Marsh, Burton W..... 458
Markham, W. C..... 418
Martin, Geo. E..... 353
Mason, W. L..... 132
McDaniel, Ruel..... 116
McDermott, J. R..... 159
McKesson, C. L..... 307
McKeever, H. J..... 461
Meckley, E. W..... 402
McLean, J. C..... 78
Moody, C. O..... 363

N

Nelles, Douglas H..... 424

O

Oakley, Thomas B..... 201
O'Connor, Garrett Daunt.....281, 342

P

Pauls, J. T..... 319
Pearl, Holman I..... 261

R

Rawcliffe, E. F..... 410
Reis, A. F..... 326
Rice, C. E..... 92
Richardson, Maurice..... 397
Root, W. H..... 123
Rumsey, Richard M..... 254

S

Savage, D. R..... 398
Schermerhorn, H. O..... 324
Simpson, C. W..... 215
Skinner, Frank W..... 259
Sours, H. G..... 447
Spelmen, H. J..... 103
Stacey, W. A..... 420
Stokes, C. R..... 250
Stone, Harold A..... 433

T

Tobin, Edw. J..... 147

W

Walker, Leon F..... 153
Ward, H. M..... 417
Wells, W. J..... 395
Williams, J. A..... 139
Winter, M. S..... 517

Z

Zeigler, F. K. R..... 377